



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
-----------------	-------------	----------------------	---------------------	------------------

09/823,127

03/30/2001

Bent S. Jensen

42390P10683

6836

8791

7590

12/15/2006

BLAKELY SOKOLOFF TAYLOR & ZAFMAN
12400 WILSHIRE BOULEVARD
SEVENTH FLOOR
LOS ANGELES, CA 90025-1030

EXAMINER

NEURAUTER, GEORGE C

ART UNIT

PAPER NUMBER

2143

DATE MAILED: 12/15/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/823,127

Applicant(s)

JENSEN, BENT S.

Examiner

George C. Neurauter, Jr.

Art Unit

2143

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 15 September 2006.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-28 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-28 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

Art Unit: 2143

DETAILED ACTION

Claims 1-28 are currently presented and have been examined.

It is noted that a new Examiner has been assigned to this case. Any future correspondence regarding this case should be directed to the Examiner listed below.

Continued Examination Under 37 CFR 1.114

A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 15 September 2006 has been entered.

Response to Arguments

Applicant's arguments filed 15 September 2006 have been fully considered but they are not persuasive.

The Applicant argues that the combined teachings of White and Isfeld do not teach the claimed invention. The Examiner is not persuaded by these remarks and concurs with the findings of the previous Examiner. Specifically, the Applicant argues that White does not teach a frame fragmentation control information that is appended to the end of the data segment. However, the

Art Unit: 2143

Applicant readily admits that "White's teaching requires that two separate sets of information to be included in the subframe...a trailer at the end" (page 8 of the response).

Therefore, the Applicant readily admits that there is frame fragmentation control information at the end of the subframe or "data segment". White does disclose this limitation since the claim does not specifically require that the data segment not have any other information added to it. Therefore, this argument is moot.

The Applicant also argues that the combined teachings of White and Isfeld do not teach a frame fragment sequence number, a channel number, or a first fragment indicator. The Examiner respectfully does not agree. As shown by the previous Examiner, White and Isfeld do teach these limitations (see previous Examiner's notations; see also paragraphs 0046 and 0048 of White and column 14, lines 40-47 of Isfeld). The Applicant also argues that White and Isfeld do not teach an extension indicator. The Examiner also does not agree in view of the previous Examiner's rejection.

In response to applicant's argument that there is no suggestion to combine the references, the examiner recognizes that obviousness can only be established by combining or modifying the teachings of the prior art to produce the claimed

Art Unit: 2143

invention where there is some teaching, suggestion, or motivation to do so found either in the references themselves or in the knowledge generally available to one of ordinary skill in the art. See *In re Fine*, 837 F.2d 1071, 5 USPQ2d 1596 (Fed. Cir. 1988) and *In re Jones*, 958 F.2d 347, 21 USPQ2d 1941 (Fed. Cir. 1992). The references are directed to transmission and reception of fragmented messages and frames. It is *prima facie* obvious to combine two compositions each of which is taught by the prior art to be useful for the same purpose, in order to form a third composition to be used for the very same purpose, the idea of combining them flows logically from their having been individually taught in the prior art. See MPEP 2144.06 and *In re Kerkhoven*, 626 F.2d 846, 850, 205 USPQ 1069, 1072 (CCPA 1980).

It is also noted that the Examiner has cited prior art listed in the PTO-892 form included with this Office Action disclose methods, systems, and apparatus similar to those claimed and recited in the specification regarding frame fragmentation. It is suggested by the Examiner that the Applicant consider these cited references when preparing a response to this Office Action.

Art Unit: 2143

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

Claims 1-28 are rejected under 35 U.S.C. 103(a) as being unpatentable over US Patent Pub. US 200210150100 A1 to White in view of US Patent 5,828,835 to Isfeld.

Regarding Claims 1-3, 9, 10, 16, 21-23, White discloses a network system, method and apparatus for adaptive frame

Art Unit: 2143

fragmentation, (Abstract; Figs. 1-13; paragraphs -#0013-0015: & Claims 1-37) comprising:

- a sending unit to transmit a first frame fragment, the first frame fragment including a first (payload - entire frame per pending Claim 10) data segment, extracted from a low priority frame and a first frame fragmentation control information appended to the end of the first data segment, the first frame fragmentation control information includes at least one of (i) a first frame fragmentation indicator to specify whether a frame fragment is a first fragment generated from the frame, (ii) a frame fragment sequence number to specify a sequential order number assigned to the first frame fragment generated from the low priority frame, and (iii) a channel number, (paragraphs - #0030-0038; 0042-0052; & Claims 1-37), (Examiner notes that White clearly teaches appending a first identifying field to a first subframe, wherein said identifying field indicates the relative position of said first subframe within a fragmented frame, which obviously reads upon Applicant's appended "fragmentation control information" encompassing "a first frame fragmentation indicator to specify whether a frame fragment is a first fragment generated from the frame", or "a frame fragment sequence number to specify a sequential order number assigned to the first frame fragment

Art Unit: 2143

generated from the low priority frame". Specifically, Examiner finds that one of ordinary skill in the art at the time of invention by Applicant would have obviously considered a first frame fragmentation indicator or a frame fragment sequence number to be "indicative of the relative position of a subframe within a fragmented frame" for purposes of adaptively identifying and fragmenting frames of lower priority into smaller subframes in order to minimize the time spent by frames of higher priority queuing for transmission over the link - paragraph #0033); and the sending unit to transmit a second frame fragment after transmitting the first frame fragment, the second frame fragment including a high priority frame and a second frame fragmentation control information appended to the end of the high priority frame, (per pending Claims 2 & 22), (paragraphs #0030-0038; 0042-0052; & Claims 1-37); and the sending unit to transmit a third frame fragment after transmitting the second frame fragment, the third frame fragment including a second (payload) data segment extracted from the low priority frame and a third frame fragmentation control information appended to the end of the second data segment, (per pending Claims 3 & 23), (paragraphs - #0030-0038; 00420052; & Claims 1-37); and

Art Unit: 2143

a receiving unit to receive the first, second and third frame fragments transmitted by the sending unit, (paragraphs - #0030-0038 & 0042-0052).

Though White clearly teaches frame fragmentation and the appending of a first identifying field, (frame fragmentation control information) to a first subframe, (White Claims 1-37), White does not specifically enumerate the inclusion of a channel number within that first frame fragmentation control information. Isfeld Clearly teaches priority based message fragmentation routing process wherein the message fragments clearly include a first frame fragmentation indicator, a last frame fragment indicator, a frame fragment sequence number, a channel number and the appending of data, (Isfeld Figs. 13-17; Col. 27, lines 62-67; Col. 28; & Col. 29, lines 1-35), wherein it would have been obvious to one of ordinary skill in the art at the time of invention by Applicant to include the channel information in the first frame fragmentation control information appended to the end of the first data segment.

The motivation to incorporate the Isfeld message/channel information fragment into the White priority-based message fragmentation method is found within White which enumerates a need for a technique which would minimize the latency and jitter exhibited by frame-based communication systems by adaptively

Art Unit: 2143

identifying and fragmenting frames of lower priority into smaller subframes in order to minimize the time spent by frames of higher priority queuing for transmission over the link, (White paragraphs # 0012 & #0033), wherein knowledge of the channel number is obviously necessary to the proper transmission and receipt of said frame data. Moreover, Examiner notes that the inclusion of channel information in the data packet was well known in the art at the time of invention by Applicant, thus in light White's teaching of appending data, inclusion of channel information within said data would have been obvious and as such, is found to be unpatentable. Thus Claims 1-3, 9, 10, 16, 21-23 are found to be unpatentable over the combined teachings of White and Isfeld.

Regarding Claims 4-8, 12-15, 17-20 & 24-28, the combined teachings of White and Isfeld are relied upon as noted herein. As noted above, White discloses a network system, method and apparatus for adaptive frame fragmentation incorporating a frame relay protocol, (paragraph #0043), comprising frames and frame fragments, (paragraphs #0043-0044), a first frame fragmentation indicator within the first frame fragmentation control information, (per pending Claims 4, 12, 17 & 24), a last frame fragment indicator, (per pending Claims 7, 15, 17 & 27), a frame fragment sequence number within the first frame fragmentation

Art Unit: 2143

control information, (per pending Claims 5, 13, 18 & 25),
(paragraphs #0045-0046, 0054 & 0055).

Though White clearly teaches frame fragmentation, White does not specifically enumerate the inclusion of a channel number within the first frame fragmentation control information, (per pending Claims 6, 14, 19 & 26), and an extension indicator, (per pending Claims 8, 15, 20 & 28). Isfeld Clearly teaches priority-based message fragmentation routing process wherein the message fragments clearly include a first frame fragmentation indicator, (per pending Claims 4, 12, 17 & 24), a last frame fragment indicator, (per pending Claims 7, 15, 17 & 27), a frame fragment sequence number, (per pending Claims 5, 13, 18 & 25) and a channel number, (per pending Claims 6, 14, 19 & 26), (Isfeld - Figs. 13-17; Col. 27, lines 62-67; Col. 28; & Col. 29, lines 1-35). Again, as noted herein, Examiner finds that it would have been obvious to one of ordinary skill in the art at the time of invention by Applicant to include the channel information in the first frame fragmentation control information appended to the end of the first data segment. 8. Additionally, Examiner notes that regarding an extension indicator, (per pending Claims 8, 15, 20 & 28), White enumerates the reservation of the seven least significant bits of the first octet to ensure all fragment headers are distinguished from and other framing

Art Unit: 2143

headers and/or flags which may be introduced during processing, (White paragraph #0047), as well as an FCS frame for purposes of CRC error detection, (White - paragraph #0043), and Isfeld enumerates a 4-bit field for software specific command list entries, (Isfeld - Fig. 15 & Col. 25, lines 31-39), wherein either portion of the frame could obviously be used to extend, add or indicate the extension or addition of fields to the frame fragment control information. Thus Claims 4-8, 12-15, 17-20 & 24-28 are found to be unpatentable over the combined teachings of White and Isfeld.

Regarding Claim 11, the combined teachings of White and Isfeld are relied upon as noted herein. As noted above, White discloses a network system, method and apparatus for adaptive frame fragmentation incorporating a frame relay protocol, (paragraph #0043), comprising frames and frame fragments, (paragraphs #0043-0044), and payload data, (paragraph - #043), wherein it would have been obvious for said payload data to include a data segment extracted from a frame, as said frame may be any number of bytes in length, and wherein within a frame fragmentation apparatus and method, it would have been obvious to divide up large portions of data into smaller portions for faster and more reliable relay of the same. Thus Claim 11 is

Art Unit: 2143

found to be unpatentable over the combined teachings of White and Isfeld.

Conclusion

The prior art listed in the PTO-892 form included with this Office Action disclose methods, systems, and apparatus similar to those claimed and recited in the specification. The Examiner has cited these references to evidence the level and/or knowledge of one of ordinary skill in the art at the time the invention was made, to provide support for universal facts and the technical reasoning for the rejections made in this Office Action including the Examiner's broadest reasonable interpretation of the claims as required by MPEP 2111 and to evidence the plain meaning of any terms not defined in the specification that are interpreted by the Examiner in accordance with MPEP 2111.01. The Applicant should consider these cited references when preparing a response to this Office Action.

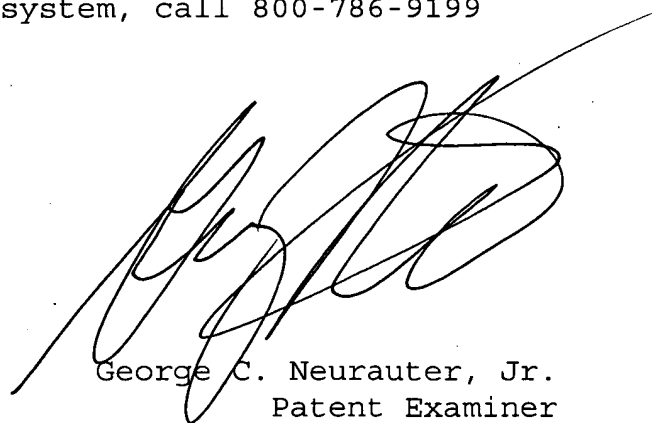
Any inquiry concerning this communication or earlier communications from the examiner should be directed to George C. Neurauter, Jr. whose telephone number is 571-272-3918. The examiner can normally be reached on Monday-Friday 9am-5:30pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David Wiley, can be

Art Unit: 2143

reached on 571-272-3923. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

A large, stylized handwritten signature in black ink, likely belonging to George C. Neurauter, Jr., is positioned above the printed name and title.

George C. Neurauter, Jr.
Patent Examiner
Art Unit 2143